Clean School Bus USA Project Description
Project Name: Wasatch Front Clean School Bus Initiative

Summary

The Wasatch Front Clean School Bus Initiative will reduce emissions from school buses operating in the Jordan School District by helping purchase ten new compressed natural gas (CNG) buses. The Jordan District serves communities in the southern end of Salt Lake County, about 15 miles south of downtown Salt Lake City. Jordan will receive $350,000 to pay for the extra cost of a CNG fueled bus above the price of a higher petroleum diesel fueled bus. Jordan currently operates 20 CNG buses and the special fueling facility required for CNG vehicles. Salt Lake Clean Cities applied for and won the EPA grant on behalf of the district and will provide the funds to the Jordan School District.

Budget

Base price of ten school buses (~$75,000/each)	$750,000
Provided by Jordan School District	
Incremental Cost for CNG buses (~$35,000/each)	$350,000
EPA Funding	
Total	$1.1 Million

Technology

CNG buses use engines with spark ignition and are fueled by compressed natural gas. Traditionally school buses are powered by compression ignited, diesel fueled engines. In similar sized, operated and maintained buses CNG produces significantly less air pollution than diesel fueled bus without advanced emission controls. A study[1] comparing CNG and diesel emissions from 1997 model-year buses showed nitrogen oxides (NOx) can be reduced 40 to 60%, carbon monoxide (CO) emissions are reduced six to twenty seven times, and particulate matter (PM) reduced four to seven times. Hydrocarbon emissions are higher for CNG vehicles but made up of compounds that are less reactive in forming ozone and much less toxic than compounds in diesel exhaust. Fleets using CNG vehicles require a special fueling station and pressurized fuel storage tanks that are different than regular diesel fueling facilities.

Air Quality

The Wasatch Front, including Ogden, Salt Lake City and Provo experience periodic air quality problems. In the past they were designated non-attainment areas for exceeding EPA's National Ambient Air Quality Standards (NAAQS) for particulate matter, ozone, and carbon monoxide. Recent studies also show that passengers, drivers and nearby pedestrians can be adversely impacted by diesel emissions. Along with complementary projects under EPA's nationwide Clean School Bus USA grant program, the Wasatch Front Clean School Bus Initiative will help reduce regional and local air quality problems and protect human health and the environment.

Contact Information:

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(1) Clark, Nigel N. et al. 1999. " Diesel and CNG Transit Bus Emissions Characterization by Two Chassis Dynamometer Laboratories: Results and Issues." Society of Automotive Engineers. Warrendal, PA.